

Study of Wheat Development to Flowering using LED Chamber

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[Introduction]

We made LED facilities to investigate physiological events of wheat and to make year-round stable breeding environment to progress into next generation. Without natural light, wheat finished all physiological stages successfully and produce normal seeds under LED facility.

[Materials and Methods]

An appropriate combination of red, far red, blue and white LED with stable temperature provide acceptable environment for wheat growing. To test the effects of light and dark periods to flowering, we fixed 16 hours light and 8 hours dark period and grow F3 plants obtained by the artificial cross of various wheat cultivars and lines.

[Results and Discussions]

We observed that clear segregation of flowering time in these progenies under the specific light and dark periods. Additionally, we carried single seed descendent using this device. We harvested fully grown seeds from the wheat on Sep. 15 2017, what we planted on June 1 2017.

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